Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of	**)**	
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RESPONSE EFFORTS UNDERTAKEN DURING THE 2017 HURRICANE SEASON	**)**	**ET Docket No. 17-344**

To: The Chief, Public Safety and Homeland Security Bureau

Via: ECFS Electronic Filing

REPLY COMMENTS OF DAN WHITE, W5DNT

I, Dan White, W5DNT, am submitting these Reply Comments in response to incomplete and potentially misleading Comments filed by Steve Waterman of WINLINK, in the above-reference proceeding. For reasons explained below, it is important that the Commission consider Mr. Waterman's positions in the context of his personal interests, which may not be consistent with the public interest in this matter.

1. I, Dan White, W5DNT, am a Registered Professional Engineer and an Amateur Extra Class license holder, first licensed in 1971. I have operated most all modes of amateur communication, including WINLINK and PACTOR, and am involved in Emergency Communications in an official leadership capacity in two Texas counties, as the RACES Radio Officer and ARES Emergency Coordinator for both nearby counties. I am also the District 2 Assistant Emergency Coordinator for ARES in North Texas. My interests in amateur radio are very diverse and widespread, not those of a "special interest group" such as those that have pushed for RM-11708 and subsequently WT 16-239 as a way to provide free email and bypass commercial maritime services under the

guise of "emergency communications" while exhibiting total disregard for incumbent narrowband spectrum users.

2. Mr. Waterman is heavily involved with WINLINK at the executive level and has had a rather singular focus since the failed RM-11306 attempt and now RM-11708/WT16-239. It is indeed unfortunate that Mr. Waterman has opportunistically used the Puerto Rico disaster to continue his sales pitch for PACTOR 4 and wide band digital in ALL of the HF & MF non phone spectrum. One unfortunate result of his comments has been to turn the focus of the FCC's original request for public input into an opportunity to advance a personal agenda, complete with cut and paste commenters supporting his case for RM-11708/WT 16-239.

3. Mr. Waterman makes several references to "severe limitations" posed by FCC Part 97.113. He cites the need to "OBSCURE" data during an emergency. He even outright questions the wisdom of the FCC for having not made a decision on RM-11708 and makes a renewed push for wide band digital. His self-serving and singularly focused push literally throws all existing CW, RTTY, PSK, JT-65 and FT-8 users under the bus, subjecting them to the PACTOR 4 "Dragon", a proprietary internet email HF system which operates with an undocumented code and utilizes "adaptive technology" designed to adapt to and override any narrow band users in its path. By its very design, PACTOR 4 is an interference generator of major proportions. In the totality of Mr. Waterman's "hurricane season response", one readily sees through his words; he really just wants an ENCRYPTED amateur wide band digital service legalized by FCC for all situations, not just emergencies. While he makes many references to "emergencies", <u>he simply wants such a system fully available at ALL TIMES, over the entire non phone portions of the HF & MF spectrum.</u> His true spectrum desires are nothing short of egregious by their very nature, as he seeks to provide a

proprietary system whose users, according to Mr. Waterman himself in the New York Times (http://www.nytimes.com/2001/11/22/technology/radio-e-mail-connects-ships-to-shore.html) are over 80% maritime users, many of whom simply wish to avoid commercial maritime service fees, not exactly the emergency communicators he would have us believe.

4. As evidenced by the filing of Mr. Timothy Moloney in this matter, an actual on the ground amateur operator, it is noteworthy that 22 individuals actually deployed to Puerto Rico and more importantly that the PACTOR 4 modems authorized by FCC's STA were never actually even deployed or used for emergency traffic, which was handled successfully with currently allowed WINLINK systems, according to Mr. Moloney. This seems to negate Mr. Waterman's opportunistic public relations effort to sell FCC on the importance of PACTOR 4 and turn FCC's request for input into purely a regulatory matter. The STA to exceed a 300 baud symbol rate has been used as little more than a publicity stunt by PACTOR 4 supporters. It played no meaningful role in the disaster response.

(https://ecfsapi.fcc.gov/file/1012254347531/FCC%20comment%20PS%20docket%2017%20344.pdf)

5. Mr. Waterman cites HIPPA as the battle cry for encryption. Interestingly, HIPPA only applies to "covered" individuals. Radio operators simply passing emergency traffic are not even covered by HIPPA in the vast majority of cases. Furthermore, in seeking input from medical professionals, I consulted with a well-known Mayo Clinic physician, Dr. Scott Wright, MD, who is also an active amateur radio operator, K0MD. Dr. Wright is of the opinion that the true need to pass HIPPA sensitive traffic over the airways in an emergency is vastly over exaggerated in Mr. Waterman's comments. According to Dr. Wright, "HIPAA applies to covered entities as defined in the statute,

defined as healthcare providers, health plans, and healthcare clearinghouses, who bill electronically. A radio station would not fit within the definition of a covered entity. As you may be aware, vendors who perform services on behalf of covered entities are classified as business associates, and the covered entity is required to enter into a business associate agreement with the covered entity by which the business associate agrees to comply with certain sections of HIPAA. Amateur Radio stations by definition are not covered or would not typically fit the business associate agreement. From a practical standpoint, it is most unlikely that HIPAA covered information would ever be transmitted via amateur radio. There may be a time when amateur radio is used to connect Hospital "1" with Hospital "2" so that health care providers can discuss management or stabilization of a critically ill patient. Even then, there is no need to reveal protected health information such as the patient's name, date of birth, etc., to discuss a health issue or treatment plan. If during a life or death emergency, there is a need to transmit protected health information, it may be the lesser of risks to reveal it if the lifesaving information that is achieved by communication justifies the risk." Dr. Wright's position is further evidenced by the fact HIPPA was really not an issue in the Puerto Rico response.

6. Amateur radio is not set up to be an encrypted or "obscured" service, as stipulated in FCC Part 97.113. As the FCC has said on numerous occasions in the past (RM-11699), we all need to know what is being said via amateur radio, and by whom. Surely Homeland Security and the National Security Agency would agree with that. After all, that is a key to the national security and self-policing aspects of our great hobby. Besides that, when a real emergency does exist, we need a transparent way to ensure that all know what is going on, so that frequencies can be properly cleared and made available for use. Right now with the new PACTOR modes, it is virtually

impossible for an Official Observer to actually perform their duties with regard to all the automated email servers that are in operation. A functional Official Observer program is essential to ensure the integrity and lawful use of amateur spectrum. May I suggest to anyone that might believe amateur radio has a need for encryption that they look to other radio services to provide for their "customers"; encryption is not consistent with the amateur radio service. When an operator is unexpectedly interfered with by one of these automated stations, callsign capture by FEC is often not practical and in fact beyond the equipment capabilities of most amateurs. A simple CW ID levels the playing field and should be a requirement of these new modes! The "busy detectors" sometimes enabled by automated stations have been demonstrated repeatedly to be ineffective at best in detecting anything other than another PACTOR signal. Busy detectors alone simply will not solve the interference problem. The fact that PACTOR claims a distinct advantage over other narrowband modes is in and of itself very problematic from an interference standpoint.

7. The single biggest problem many of us see is interference from automated stations. Based on data previously obtained from Winlink.org, many of these automatic PACTOR stations have operated at greater than 500 Hz outside of the required "automatic station bands", with no apparent regard for FCC 97.221. If they don't have any regard now for existing FCC rules, one really has to question their future regard for any voluntary band plan the ARRL might or might not develop. To expect the amateur service to self-regulate its use of bandwidth in an HF environment with global propagation is quite unreasonable. Experimentation of wideband signals should be used at UHF and above where vastly greater spectrum is available to amateurs and where global interference cannot occur due to the lack of ionospheric propagation. In reality, PACTOR is not about "experimentation", it is simply "internet and email over HF", complete with many very

troubling compliance and interference nuances. It is very noteworthy that all IARU band plans place the wideband stations in similar ACDS sub-bands as FCC 97.221 attempts to do. Mr. Waterman states that "the United States is the only country that will not allow amateur use of PACTOR 4". What he fails to mention is that PACTOR 4 is heavily limited to specific spectrum by IARU band plans. He seeks no such spectrum regulation, rather he egregiously wants "all" non-phone HF & MF spectrum.

8. My strong recommendation is that the FCC protect incumbent CW, RTTY, FT-8, PSK and JT-65 users in the lower 100 KHz end of the HF and MF bands. Additionally, except as noted for 30 and 60 meters, a bandwidth limit of 200 Hz in the lower 50 KHz of each HF and MF band would further ensure protection of CW and novel highly spectrum efficient low bandwidth modulations, like FT-8 and JT-65, developed by noble laureate Dr. Taylor of Princeton. Such narrowband experimentation is critical for the state of the radio art, one of the crucial missions of the amateur radio service. Furthermore, I believe the FCC should closely examine compliance with both FCC 97.221 and FCC 97.113 by automated and maritime email stations now in operation. The benefits of PACTOR 4 over CW or other modes in cases of emergency under adverse radio conditions are questionable at best, in part because despite the waiver granted on September 29, 2017 for use of PACTOR 4 in the wake of Hurricane Maria, it is reported that only administrative messages or tests were successfully accomplished with no actual emergency traffic conveyed using that mode. What remains most important is that bandwidth protection currently in place below 29.7 MHz by the 300-baud symbol rate limit of Section 97.307(f) of the Rules be maintained. This will protect CW and other modes that could be dramatically interfered with by use of systems with much higher symbol rates.

9. A separate sub-band for wideband data above the conventional HF & MF narrowband operational band sections, such as those described in Section 97.221 of the Rules, would be congruent with IARU band plans and would assure the integrity of narrowband operations. It also would be helpful to the Commission and the ARRL to use the extraordinary technical expertise of industry experts such as Dr. Theodore Rappaport, to address data usage in the HF and MF bands.

10. Mr. Waterman's unwavering public push for wide band digital goes way back to the failed RM-11306. In that process, he compared the resistance to wide band digital PACTOR as the resistance AM operators had to SSB. This comparison is totally erroneous and misleading. SSB was not a commercial use of amateur radio, not encrypted, not obsolete technology like WINLINK but rather cutting edge, not proprietary, did not require purchase of an outrageously high priced box rather you could build it yourself, not erroneously "marketed" as the Holy Grail for "emergency communications", not totally incompatible with existing modes, not automatically operated by a robot, not a mode that was deliberately used to circumvent FCC Part 97 and finally not for the primary use of "non-amateur" radio operators like Mr. Randal Evans, who filed comments during the RM-11708 process. Here is Mr. Evans RM-11708 filing, as published on the FCC web site. It says it all! (https://ecfsapi.fcc.gov/file/7521315143.pdf)

> *"To: FCC - RM-11708 The sailing forms are all encouraging us to file comments in support of RM-11708. This is my first filing and if I mess this up, please see SailNet Forum at: http://www.sailnet.com/forums/general-discussion-sailing-related/111746-us-citizensurged-support-fcc-rm-11708-a.html. I have experienced very dependable service*

from the amateur radio Internet Winlink system. It's a great service because all of the other available Internet services cost money. Even when I am topside cruising, the system runs automatically below deck publishing my position reports and downloading my email. I use the system for sending position reports, ordering supplies, repairs, chatting with friends and posting to Facebook. My only complaint is that it needs to be much faster. I am not an amateur radio operator yet but a friend lets me use his call with a SIDD on the end. I hope to get my own ham call soon. From what I read on the sailing forums, RM-11708 will allow Winlink eMail to run twice as fast. That is great and I am for that. Some of the technical folks are saying that if RM-11708 is published with no bandwidth we can get even faster Internet and might be able to stream movies on the Winlink Internet. I'm for passing RM-11708 into law with no bandwidth limits."

Conclusions

Mr. Waterman's submission offers the FCC very little useful information as related to the hurricane response, and it falls woefully short, in the context of emergency preparedness or otherwise, of justifying his purported need for wideband data in ALL narrowband MF & HF band segments. Moreover, it totally fails to address significant associated interference problems, which would be exacerbated in emergency preparedness situations. Mr. Waterman's recommendations would result in harmful interference, thus actually hindering future amateur radio emergency response capabilities. Furthermore, the use of encryption, or "obscuring" as he says, by way of undocumented codes such as PACTOR 2, 3 and 4 should be considered as a matter of national security and not permitted.

FCC is urged not to give any weight to Mr. Waterman's incomplete and potentially misleading comments in this matter. FCC's request was not intended to spark a Regulatory debate as Mr. Waterman has done.

Respectfully submitted,

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